20 March 2008

### SCOPE OF WORK

# RECREATIONAL CARRYING CAPACITY STUDY TABLE ROCK LAKE

# 1. General Project Description and Scope of Work (SOW):

**1.1 Description and Purpose**. Table Rock Lake is an extremely popular recreation area in Southern Missouri and Northwest Arkansas near the town of Branson. There is a perception at the local level that the lake is crowded and that recreational experiences may be diminishing. The purpose of this study is to gather information, using scientific methods, about recreational boating use on Table Rock Lake and the perceptions and preferences of boaters concerning the natural, social, and managerial environment within the areas of the lake that they frequent.

## 1.2. Study Objectives:

- a. Determine the impact current lake usage has on the quality of recreation, safety and the environment:
- b. Determine the effect that marinas, boat ramps and commercial activities have on the carrying capacity and distribution of users on the lake;
- c. Determine the boater's perception of the resource, social and managerial condition of the lake:
- **1.3. Scope.** The Contractor shall provide all labor and materials necessary for completing the water related Recreational Carrying Capacity Study at Table Rock Lake (over and above the Government Furnished Materials and Manpower as listed in Paragraph 7.0 below). The main purpose of this study is to determine visitor perceptions of the impacts that existing users and facilities have on the lake in comparison with the carrying capacity of the lake. This information may be utilized during an Environmental Impact Study (EIS) conducted to project the effects on recreation and the environment if proposed facilities are authorized.
- **1.4. Location**. Table Rock Lake and surrounding counties in Missouri and Arkansas.

#### 2.0 General Work Tasks.

- 2.1 Task 1 Project Management and Coordination with the Government
- **2.2** Task 2 Conduct Data Search and Field Surveys
- **2.3** Task 3 Prepare Draft Carrying Capacity Study, Final Carrying Capacity Study and distribute.

- 3.0 Detailed Work Tasks.
- 3.1 Task 1 Project Management and Coordination with the Government.
- **3.1.1. Project Management.** The Contractor shall assign a Project Manager (PM) from his staff to oversee all matters, both contractual and technical, concerning this project. This PM shall coordinate the progress of the Contractor's activities with the U.S. Army Corps of Engineers, Little Rock District (SWL) and specifically the SWL-PM (Win Hargis, Planning and Environmental Office, P.O. Box 867, 700 West Capital, Little Rock, AR 72203, ph 501-324-5018).
- **3.1.2. Orientation Meeting**. The contractor shall attend and participate in an Orientation Meeting at Table Rock Lake Project Office with the Government's Project Manager (Deliverable 1) within 7 days of the Governments Notice to Proceed (NTP). The purpose of this meeting shall be to review with contractor personnel, the Government Furnished Materials (Paragraph 7.0 below), and to finalize the contractor's Water Related Recreational Use Study Project Management Plan (Study Plan). Agenda items shall include a review of the study methodology and assumptions, work schedule, definition of the study market area and approval of interview/survey processes used to obtain relevant information from users and concessionaires, survey forms and questionnaires. The contractor shall be responsible for recording and documenting items of discussion/decision for this and all subsequent meetings, interviews or telephone conversations. A draft of this documentation shall be provided to the PM for review and approval within five days of the orientation meeting. Upon approval, the contractor will distribute as directed by the PM.
- **3.1.3. Study Plan**. The contractor shall furnish the Government 3 separately bound copies of the completed Study Plan (Deliverable 2), not more than 7 days following the orientation meeting. The study plan will include, but not be limited to, the following:
- a. A detailed Gantt chart (or equivalent) schedule of project activities and their timeframes to meet the milestone schedule as listed in Section 5 of this SOW. The Contractor shall update the chart as often as necessary or as directed by the SWL PM. The Contractor shall provide an electronic version and four (4) 11"X17" sized copies of the each updated chart.
- b. A list of the Contractor's staff and the responsibilities and projected work effort for each person.
- c. A description of the Contractor's methodology in preparing the Carrying Capacity Study.
  - d. A list of any subcontractors and their roles.
- e. A list of all major subject items that will be included in the Carrying Capacity Study. This list shall resemble a "detailed and expanded" table of contents.

- **3.1.4. Monthly Progress Reports**. The contractor shall furnish the Government's Project Manager a copy of a monthly progress report, briefly describing work items completed in the preceding 30 day period and anticipated for the following 30-day period, respectively (Deliverable 3). These reports shall be provided on or about the 15th of each month starting the month after issuance and until the completion of this delivery order.
- **3.1.5. Site Safety Health Plan (SSHP).** Prior to conducting any fieldwork, the Contractor shall prepare a SSHP in accordance with EM 385-1-1, Safety and Health Requirements Manual. The plan shall be approved by the Contracting Officer or his/her representative before commencement of field work.
- **3.1.6. Cooperating Partner Workshops.** The contractor shall prepare and hold three (3) Cooperating Partner Workshops. These will be held after the Orientation Meeting. The first will be an "issues" workshop held prior to the commencement of survey activities. The second will be a "proposed actions" workshop held after the results of the surveys have been analyzed and courses of action can be identified. The third will be a "record of decision" workshop to be held prior to the distribution of the final Study Report.

### 3.2 TASK 2. Conduct Data Search and Field Surveys.

3.2.1. On site data collection at, public boat launching ramps,to include marinas, Corps of Engineers Recreation Areas and other public launch areas on Table Rock Lake. The contractor shall conduct interviews (mailed and on-site) with the users of these facilities and Cooperating Partners and Stakeholders in the Table Rock Lake area eliciting information for analysis regarding the study objectives. Surveys shall be designed to conform to Engineering Regulation 1105-2-100; Appendix B, paragraph B-5, Section (5), specifying OMB approved survey questionnaires. Critical information from boating users on visitor perception shall include but not be limited to geographical origin, travel time and cost, frequency of visitation, length of visitation, and collateral activities enjoyed, type and size of boat(s) used, use of ramps, docks, or marinas, an expressed interest in use of marina facilities both existing and prospective. All questions shall be approved by the Operations Manager, Table Rock Project Office, prior to their use. Information obtained from personal interviews shall be combined with data gathered from various source publications (e.g., U. S. Census, Local Councils of Governments, U. S. Department of Commerce, and National Marine Manufacturers Association).

Data collection has two parts: mailed surveys and launch ramp facility surveys.

#### 3.2.2. Mailed Survey

Determine the perceived effects of crowding, safety and environmental impact on users of the lake. Discuss the apparent natural use zones of the lake as identified by the interviewees in the questions below.

### 1) Adjacent Landowners

Survey adjacent landowners (of a representative random sample, not less than 400) and list any concerns they may have regarding their recreational experiences and perceptions including crowding, congestion, private boat docks, shoreline erosion, noise, etc. Determine the percentage of adjacent landowners that are engaged in the following: water skiing, fishing, personnel water crafts (PWC's), sailing, swimming, pleasure boating, rafting, row boats, other. Also query about their opinions on lake aesthetics, water quality, no wake zones, use patterns of the lake, competing uses (fishing vs. water skiing), waterfowl hunting, crime, boat speed, and boat noise. Determine where users choose to recreateand their reason for choosing that particular lake area, ramp, marina, or resort to recreate.

## 2) Marina Slip Renters, Private Dock Permit Holders, Limited Motel/Resort users

Mail survey questionnaires to Not Less Than 400 each of Marina Slip Renters, Private Dock Permit Holders, and Limited Motel/Resort users, to determine their opinions about lake usage. Determine the percentage of lake surface users engaged in the following: water skiing, fishing, PWC's, sailing, swimming, pleasure boating, rafting, rowboats, other. Also, determine opinions on water surface congestion, private boat docks, aesthetics, water quality, no wake zones, use patterns, competing uses (fishing vs. water skiing), uncleared timber, waterfowl hunting, crime, boat speed, boat noise, using less congested water surface. Determine where users reside and their reason for picking the particular ramp/marina they are using.

## 3.2.3 Facilities Survey

Determine the number of boats on the lake by scheduling boat counts determined by a scientific random sampling process during the summer, peak visitation period (May through August). These days should be non-rain days with wind less than wind warning levels(< 23 mph) and the lake level shall not be below elevation 910 msl. This count should establish the actual number of vessels on the water during the peak recreational times of the day. Discuss the actual turnover rate of boat ramp users and marina users verses the effect that each has to the carrying capacity of the Lake. Discuss the apparent natural use and avoided zones of the lake as identified by the interviewees below.

## 1) Boat Launching Ramps

Surveyors should:

a) Take exit interviews of not less than 400 boat launching ramp users to determine the percentage of users engaged in one or more of the following: water skiing, fishing, PWC's, sailing, scuba diving, swimming, pleasure boating, rafting, row boats, other. Also, determine opinions on water surface congestion, private boat docks, aesthetics, water quality, no wake zones, use patterns, competing uses (fishing vs. water-skiing), uncleared timber, waterfowl hunting, crime, boat speed, boat noise, using less congested

water surface. The survey should determine where users reside and their reason for choosing that particular area of the lake to recreate. Record type and size of vessel used while on the lake.

- b) Determine the areas that the interviewees actually utilized that day for their activities and why they utilized those areas.
- c) Determine the number of authorized (designated) parking spaces available for each ramp and determine the number of actual parked vessel towing vehicles, including those in overflow areas, hourly.

# 2) Boat Counts

Count boats on the lake to detect congested areas at times and dates determined by scientific random sampling method. Use lake surface zones to describe where congestion is the most prevalent. Discuss whether addition of facilities or services would disperse or draw the crowd to areas of the lake where congestion is not a problem.

#### 3.2.4. Analyses:

Using an accepted carrying capacity method to determine and recommend the maximum and optimum recreational carrying capacity of the lake that does not detrimentally impact the recreation and resource values. The carrying capacity determination should be based on types of vessels and the reasonable, safe and/or recommended water surface area required for each.

# 3.3 - TASK 3. Prepare Draft Carrying Capacity Study and Final Carrying Capacity Study

**3.3.1. Public Workshop (Optional).** The contractor shall prepare and hold three (3) public workshops presentating the results of the Recreational Carrying Capacity Use Study to the study participants and Government officials (Deliverable 4) in not more than 180 days following the Notice to Proceed. One meeting will be held at a Government furnished meeting room in the Table Rock Project Office Lake Area. One meeting will be held in the Shell Knob area of the Lake. A third meeting will be held at Kimberling City, MO.. For meetings other than the one at the Table Rock Project Office, the contractor will provide for the meeting room, any required administrative support, audio visual equipment, and security if required. The purpose of the meetings is to obtain, review and obtain comments from the participants of the study. All comments and recommendations should be addressed in the Draft Recreational Carrying Capacity Use Study Report. This presentation shall comprise a packet of text, tables, charts, maps, and other graphics necessary to present, document and support the preliminary findings and recommendations. It shall include, but not be limited to, a description of the Recreational Carrying Capacity Use Study, a summary of the methodology and findings of data collection activities, a summary of the findings of the analyses. In addition, this presentation should include a listing of the major assumptions and limitations of the

analysis and recommendations for additional data collection and analyses to be used in developing further analyses.

- **3.3.2. Draft Recreational Carrying Capacity Study Report.** The contractor shall prepare and submit 3 copies of the Draft Recreational Carrying Capacity Study Report (Deliverable 5) as shown in paragraph 4.0 below, within 35 days of receipt of Government review comments on the Preliminary Recreational Carrying Capacity Study On-Board Review Presentation Workshop.
- **3.3.3. Final Recreational Carrying Capacity Study Report**. The contractor shall, upon notice by the Government's Project Manager, produce and deliver to CESWL officials the Final Recreational Carrying Capacity Study Report. The Final Study Report shall include specific management recommendations for each zone or compartment of Table Rock Lake. The Contractor's delivery shall include, as shown in paragraph 4.0 below, copies of the Final Recreational Carrying Capacity Study Report (Deliverable 6). This also includes delivery of the basic report on compact disc in Microsoft Word format.
- **3.3.4. Supporting Documentation.** In addition to the Final Recreational Carrying Capacity Report and accompanying compact disk, the contractor will deliver 3 bound, 8.5" x 11" copies of all miscellaneous supporting data, references, explanations, definitions of terms, analysis not covered in the basic document format; minutes of all meetings and copies of any pertinent correspondence (Deliverable 7).

### 4.0 DELIVERABLES:

The following are considered deliverable items and the contractor shall be required to provide the number of copies identified below unless otherwise directed by the Government's Contracting Officer.

Title	Deliverable #	No. of Copies
Orientation Meeting	1	one meeting
Project Management Plan	2	3
Monthly Progress Report	3	8, one each mo
Cooperating Partners and Stakeholders Meetings	4	3 mtgs as schd
Preliminary Recreational Carrying Capacity Review Workshop (Optional)	v 5	3 mtg as schd

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Draft Recreational Carrying Capacity Study Report

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Final Recreational Carrying Capacity Study Report

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Recreational Carrying Capacity Study Backup Material

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**5.0. Schedule**. Deliverables due the Government under this delivery order are to be submitted in accordance with the following schedule unless otherwise directed by the Government's Contracting Officer.

PROJECT MILESTONE	DAY FROM AWARD OF	PERCENTAGE OF WORK
	TASK ORDER*	COMPLETED
Notice to Proceed (NTP)		
and Start Work	0	0
Orientation Meeting	7	10%
KTR Submit draft Study		
Plan/PMP, draft SSHP	14	
Government Review of		
draft Study Plan/PMP and		
SSHP	21	
KTR Submit Final Study		
Plan/PMP and SSHP	28	25%
Government accepts Final		
Study Plan/PMP and SSHP	29	
KTR holds Workshop to		
present preliminary study		
information (Optional)	180	65%
KTR Submit Draft Carrying		
Capacity Study Report	215	75%
Government Review of		
Draft Carrying Capacity		
Study Report	245	
KTR Submit Final Carrying		
Capacity Study Report	275	95%
KTR Submit Study Backup		
Material	290	100%

<sup>\*</sup>Calendar Days following the Government's Notice to Proceed. Submittal Dates include Government review periods of 15 days between Deliverable Nos. 5 and 6.

The delivery order shall remain open for a total of 350 days to allow for unanticipated delays in the final submittal/review process and to allow for final briefing assistance from the contractor.

# 6.0 Special Considerations.

- **6.1. Deliverables Format.** Final trim size of all delivered documents shall be 8.5 x 11 inches. Image size of standard text shall not exceed 7 x 10 inches. Wherever possible, avoid the use of oversized illustrations, charts, maps or artwork. Fold Outs shall not exceed 11 x 17 inches with a maximum image size of 9.75 x 15.5 inches. Contractor is to furnish 6 copies of the Draft Recreational Carrying Capacity Use Study Report and 15 copies (plus one camera ready) of the completed Final Recreation Use Study Reports to the Government. Contractor shall also make delivery of the final report via electronic media, i.e. compact disc in Microsoft Word software suitable for use by CESWL. Details will be specified during orientation meeting.
- **6.2. Government Property.** All original materials, visual aids, software, and text developed in performance of the task listed herein will be the property of the Government, and will not be used, distributed or published by the contractor or any of his employees, direct or indirect, without specific permission of the CESWL through the Government's Project Manager.
- **6.3. Technical Issues.** The contractor or persons employed by or in any way responsible to the contractor in respect to accomplishment of this scope of work shall make themselves available to respond to technical issues. Technical issues are any operational or structural difficulty encountered in explaining results and the methodology.
- **6.4. Licenses and Permits**. The contractor shall, without additional expense to the Government, be responsible for obtaining any necessary licenses and permits, and for complying with any Federal, State, and local laws, codes, and regulations applicable to the performance of this work.
- **6.5. Public Disclosures.** The contractor shall make no public announcements or disclosures relative to information contained or developed under this contract except as authorized in writing by the Contracting Officer or his/her duly authorized representative. In addition, the Contractor will be required to design, develop, or operate as part of this analysis, a system of records on individuals, to accomplish an agency function subject to the Privacy Act of 1974, Public Law 93 579, December 31, 1974 (5 U.S.C, 55a) and applicable agency regulations. Violation of the Act may involve the imposition of criminal penalties.
- **6.6. Records.** The contractor shall be required to provide a record of all significant conferences, meetings, discussions, verbal directives, telephone conversations, etc. with government representatives relative to this contract in which the contractor and/or

designated representatives participated. The contractor shall forward this record to the Government's Project Manager as soon as possible following this activity. The contractor shall also be required to provide a record of requests for and/or receipt of government furnished material or data that if not furnished in a timely manner would significantly impair the normal progression of work under this contract.

- **7.0. Government Furnished Materials**: The Government shall furnish the following items to the Contractor at the Orientation Meeting:
- 1) Any available historical recreation visitation data for Table Rock Lake
- 2) A copy of ER 1105-2.100, Appendix B, paragraph B-5 Section (5)
- 3) A schedule of availability for boat and operator as required to support the surveys
- 4) A map of lake study zones
- 5) A map showing existing private boat docks
- 6) A copy of the latest Shoreline Management Plan for Table Rock Lake
- 7) A copy of the latest Environmental Assessment for the Table Rock Lake Shoreline Management Plan

# 8.0. Contract Administration Data.

- **8.1.** Contracting Officer (CO): The term as used herein does not include any representative not acting within the scope of his/her authority, notwithstanding any of the provisions of this contract, the CO shall be the only individual authorized to redirect the effort or in any way amend or modify the terms of this contract. Final inspection and acceptance of all work called for under this contract SWL be performed by the Contracting Officer and his/her duly authorized representative. The authorizing CO shall reside within U.S. Army Corps of Engineers, Little Rock District, P.O. Box 867, Little Rock, Arkansas 72203-0867.
- **8.1.2. Government Project Manager**. The Government Project Manager shall be U.S. Army Corps of Engineers, Little Rock, ATTN: Win Hargis (Or Jim Sandberg or Greg Oller), Planning and Environmental Office, P.O. Box 867, Little Rock, Arkansas 72203-0867. Telephone (501) 324-5018. All correspondence regarding this contract, including invoices and submittal should be directed to Mr. Hargis at the above address.
- **8.2. Payments**: The Contracting Officer requires that Contractor billings be submitted by the 15th of each month and accompanied by a summary of work performed during the billing period.

- **8.3.** Contractor Release. The Contractor is required to submit his/her written and signed "Release of Claims" form to the Contracting Officer with his/her final bill for service rendered under the terms of this contract.
- **8.4. Release of Information.** The information developed, gathered, and assembled in fulfillment of the contract as defined in or related to the SOW shall not be released by the Contractor, his/her consultants, his/her subcontractors or their associates without prior coordination and approval by the Contracting Officer or his/her designee.
- **8.5.** Use of Information. The information developed, gathered, and assembled in fulfillment of the contract requirements as defined or related to the SOW will become the complete property of the Government and shall, therefore, not be used by the Contractor for any purpose at any time without the written consent of the Contracting Officer.